

IN THE CLAIMS

This listing of the claims replaces all prior versions of the claims in the application.

Listing of the Claims

1. (Withdrawn) An isolated polypeptide comprising an amino acid sequence selected from the group consisting of:
 - a) an amino acid sequence selected from the group consisting of SEQ ID NO:1-14,
 - b) a naturally occurring amino acid sequence having at least 90% sequence identity to an amino acid sequence selected from the group consisting of SEQ ID NO:1-14,
 - c) a biologically active fragment of an amino acid sequence selected from the group consisting of SEQ ID NO:1-14, and
 - d) an immunogenic fragment of an amino acid sequence selected from the group consisting of SEQ ID NO:1-14.
2. (Withdrawn) An isolated polypeptide of claim 1 selected from the group consisting of SEQ ID NO:1-14.
3. (Once Amended) An isolated polynucleotide encoding a polypeptide ~~of claim 1~~ comprising an amino acid sequence selected from the group consisting of:
 - a) the amino acid sequence of SEQ ID NO:5,
 - b) a naturally occurring amino acid sequence having at least 90% sequence identity to the amino acid sequence of SEQ ID NO:5,
 - c) a biologically active fragment comprising at least 150 contiguous amino acids of the amino acid sequence of SEQ ID NO:5, wherein said biologically active fragment has sphingosine kinase activity, and
 - d) an immunogenic fragment of the amino acid sequence of SEQ ID NO:5.
4. (Once Amended) An isolated polynucleotide of claim 3 selected from the group consisting of SEQ ID NO:15-28 having SEQ ID NO:19.

5. (Original) A recombinant polynucleotide comprising a promoter sequence operably linked to a polynucleotide of claim 3.

6. (Original) A cell transformed with a recombinant polynucleotide of claim 5.

7. (Withdrawn) A transgenic organism comprising a recombinant polynucleotide of claim 5.

8. (Once Amended) A method for producing a polypeptide ~~of claim 1~~ comprising an amino acid sequence selected from the group consisting of:

a) the amino acid sequence of SEQ ID NO:5,

b) a naturally occurring amino acid sequence having at least 90% sequence identity to the amino acid sequence of SEQ ID NO:5,

c) a biologically active fragment of the amino acid sequence of SEQ ID NO:5, wherein said biologically active fragment has sphingosine kinase activity, and

d) an immunogenic fragment of the amino acid sequence of SEQ ID NO:5,

the method comprising:

i) culturing a cell under conditions suitable for expression of the polypeptide, wherein said cell is transformed with a recombinant polynucleotide, and said recombinant polynucleotide comprises a promoter sequence operably linked to a polynucleotide ~~encoding the polypeptide of claim 1~~ of claim 3, and

ii) recovering the polypeptide so expressed.

9. (Withdrawn) An isolated antibody which specifically binds to a polypeptide of claim 1.

10. (Once Amended) An isolated polynucleotide comprising a polynucleotide sequence selected from the group consisting of:

a) ~~[[a]] the polynucleotide sequence selected from the group consisting of SEQ ID NO:15-28~~ of SEQ ID NO:19,

b) a naturally occurring polynucleotide sequence having at least 90% sequence identity to ~~[[a]] the polynucleotide sequence selected from the group consisting of SEQ ID NO:15-28 of~~ SEQ ID NO:19,

- c) a polynucleotide sequence complementary to a),
- d) a polynucleotide sequence complementary to b), and
- e) an RNA equivalent of a)-d).

11. (Once Amended) An isolated polynucleotide comprising at least ~~[[60]]~~ 500 contiguous nucleotides of a polynucleotide of claim 10.

12. (Withdrawn) A method for detecting a target polynucleotide in a sample, said target polynucleotide having a sequence of a polynucleotide of claim 10, the method comprising:

- a) hybridizing the sample with a probe comprising at least 16 contiguous nucleotides comprising a sequence complementary to said target polynucleotide in the sample, and which probe specifically hybridizes to said target polynucleotide, under conditions whereby a hybridization complex is formed between said probe and said target polynucleotide, and
- b) detecting the presence or absence of said hybridization complex, and, optionally, if present, the amount thereof.

13. (Withdrawn) A method of claim 12, wherein the probe comprises at least 30 contiguous nucleotides.

14. (Withdrawn) A method of claim 12, wherein the probe comprises at least 60 contiguous nucleotides.

15. (Withdrawn) A pharmaceutical composition comprising an effective amount of a polypeptide of claim 1 and a pharmaceutically acceptable excipient.

16. (Canceled)

17. (Withdrawn) A method for screening a compound for effectiveness as an agonist of a polypeptide of claim 1, the method comprising:

- a) exposing a sample comprising a polypeptide of claim 1 to a compound, and
- b) detecting agonist activity in the sample.

18. (Withdrawn) A pharmaceutical composition comprising an agonist compound identified by a method of claim 17 and a pharmaceutically acceptable excipient.

19. (Canceled)

20. (Withdrawn) A method for screening a compound for effectiveness as an antagonist of a polypeptide of claim 1, the method comprising:

- a) exposing a sample comprising a polypeptide of claim 1 to a compound, and
- b) detecting antagonist activity in the sample.

21. (Withdrawn) A pharmaceutical composition comprising an antagonist compound identified by a method of claim 20 and a pharmaceutically acceptable excipient.

22. (Canceled)

23. (Withdrawn) A method for screening a compound for effectiveness in altering expression of a target polynucleotide, wherein said target polynucleotide comprises a sequence of claim 4, the method comprising:

- a) exposing a sample comprising the target polynucleotide to a compound, and
- b) detecting altered expression of the target polynucleotide.